

REMARKS

Reconsideration and allowance of the above application are respectfully requested.

As an initial matter, Applicant gratefully acknowledges the Examiner's indication that Claims 10 and 20 as originally filed are patentable over the prior art on record. In compliance with the Examiner's suggestions, Claims 10 and 20 have been amended as independent to include all limitations in their respective base claims and intervening claims. Accordingly, the objections to Claims 10 and 20 have been overcome and the amended Claims 10 and 20 are now in condition for allowance.

Claims 1-23 remain pending where various claims have been amended without adding new matter. Claims 24-42 have been newly added and are fully supported by the original specification. Hence, upon entry of the above amendment, Claims 1-42 are pending and under consideration. All pending claims are patentable as explained in the following remarks.

Claim 5 has been amended to overcome the lack of antecedent basis as correctly indicated by the Examiner. Hence, the rejection under 35 USC 112, second paragraph should be withdrawn.

With respect to the drawings, Applicant hereby submits a new set of informal drawings to replace the original drawings on file. This new set includes proposed legends in red as requested by the Examiner. In addition, FIG. 5 has been amended to correct several errors made by the prior patent counsel of Applicant. Applicant regrets such inadvertent errors made by his prior patent counsel and respectfully submits that the proposed corrections be made. Based on the original specification, the corrections in FIG. 5 do not add new matter. Applicant will prepare and file a new set of formal drawings after the Examiner approves the proposed changes in the drawings.

The specification has been amended to update the information of a patent application cited in the text and to conform the text to the proposed changes made in FIG. 5. No new matter is added.

We now turn to the rejections to claims over the cited prior art.

Claims 1-3 and 13-14 stand rejected under 35 USC 102(a) as allegedly being anticipated by Bannister. The Office Action contends that Bannister describes an unused wavelength as a reserved wavelength buffer.

The amended Claims 1 and 13, in contrast, recite "the plurality of input channels includes at least a plurality of adjacent WDM channels within one ITU WDM window which comprise: (A) a reserved wavelength buffer selected from one of the plurality of adjacent WDM channels within the one ITU WDM window." These features allows for highly dense WDM channels within each ITU window and notably the "in-band" wavelength conversion and buffering within an ITU window as suggested by the title of this application. See, e.g., page 7, lines 4-18, of the specification. The cited Bannister clearly fails to suggest such features.

For at least this reason, Claims 1-2 and 13-14 are distinctly different from and thus are patentable over Bannister.

Claims 1, 4-9, and 15-19 stand rejected under 35 USC 102(a) as allegedly being anticipated by Blumenthal. Applicant respectfully traverses this contention.

Like Bannister, Blumenthal fails to disclose the "in-band" features recited in Claims 1, 4-5, 9, 15, and 19. Hence, rejections to these claims should be withdrawn based on the above arguments.

Claims 6-8 recite use of a signal-producing component to reproduce the first packet of information within the output optical signal in the active wavelength buffer. This signal-producing is specifically recited to include "a modulator, accepting as one input, the local oscillator signal, and as another input, a signal representing the first packet of information, the modulator further producing as an output, a modulated output signal including the first packet of information." Hence, an optical modulator is used to achieve the wavelength conversion to the active wavelength buffer in the output. Notably, the output optical signal in Claims 6-8 "is optically obtained from the input optical signal."

Blumenthal, in contrast, performs the label swapping by using a local laser and a Mach-Zehnder modulator in the SOA-WC module (FIG. 2 on page 1498). The MZ modulator shown in the lower part of FIG. 2 is not used to achieve the wavelength conversion. Hence, Claims 6-8 are distinctly different from Blumenthal and are patentable under 35 USC 102(a).

Similarly, Claims 15-18 are patentable over Blumenthal based on the above arguments for Claims 6-8.

Claims 15 and 19 recite the "in-band" features as discussed above. In this regard, Blumenthal, similar to other cited

references, fails to so disclose. Hence, Claims 15 and 19 are patentable over Blumenthal.

The Office Action cites Shiragaki under 35 USC 102(b) to reject Claims 1, 12, 13, and 22. This contention is respectfully traversed because Shiragaki discloses a network with optical switches for WDM signals and has nothing to do with wavelength conversion and buffering. Like other cited references, Shiragaki fails to suggest in any way the recited "in-band" features as discussed above. Hence, Claims 1, 12, 13, and 22 are patentable over Shiragaki.

Claim 23 as amended is patentable under 35 USC 102(a) over Blumenthal because Blumenthal fails to disclose the "in-band" features recited.

Finally, the Office Action cites the combination of Chang and Frigo to reject Claims 1, 11, 13, and 21 as being obvious under 35 USC 103(a). However, Chang and Frigo, either individually or collectively, fail to suggest and disclose the recited "in-band" features as discussed above. Hence, under 35 USC 103(a), Claims 1, 11, 13, and 21 are patentable.

As for the newly-added Claims 24-42, the cited references fails to disclose each recited feature based on at least the above arguments as well as their own merits. For example, Claim

24, in addition to the "in-band" buffering feature, recites "an optical modulator to modulate the optical data signal at a selected local oscillator frequency to shift a selected WDM channel by the selected local oscillator frequency to fall within the buffer channel." Nothing in any of the cited prior art references suggests such features. Therefore, Claims 24-42 are patentable.

In summary, all claims, 1-42, are now patentable and the application is in full condition for allowance. An official notice of allowance is respectfully solicited.

Finally, Applicant files an Information Disclosure Statement along with this response to submit U.S. Patent No. 6,069,732 issued to Koch et al. for consideration by the Patent Office. This reference was cited on page 2 of the original specification.

Enclosed is a check for \$730.00 for fees of additional claims and an extension of time for one month.

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Please apply any other fees or credits to Deposit Account  
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Respectfully submitted,

  
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Attachment: Annotated drawings